

Pharmacology

**TAC Workshop
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simon.collins@i-Base.org.uk

Definitions

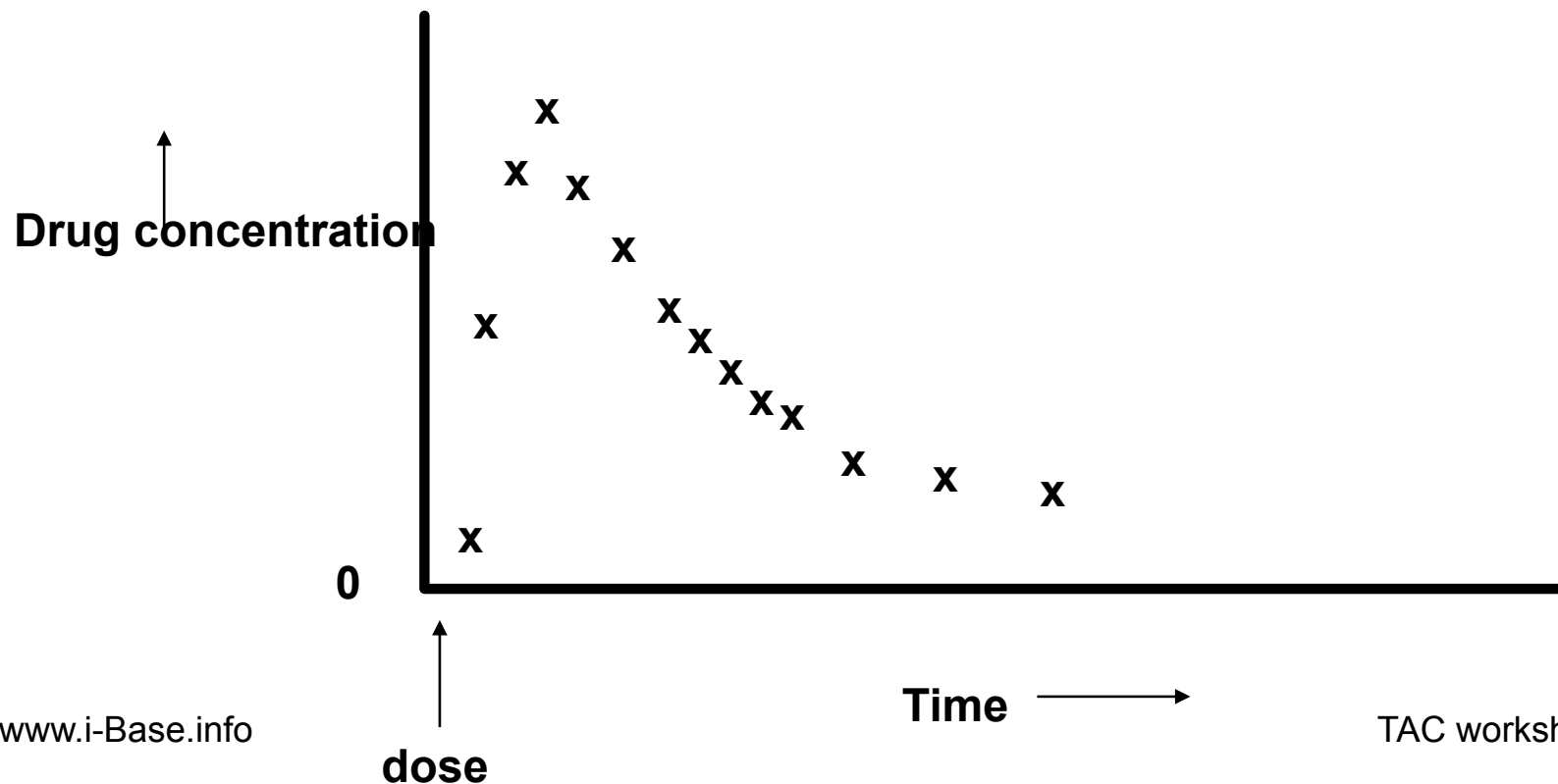
**Pharmacology:
study of drugs**

**Pharmacokinetics (PK):
study of how drugs behave in
a living person (or animal)**

Using graphs

Graphs can show you information in a concentrated way.

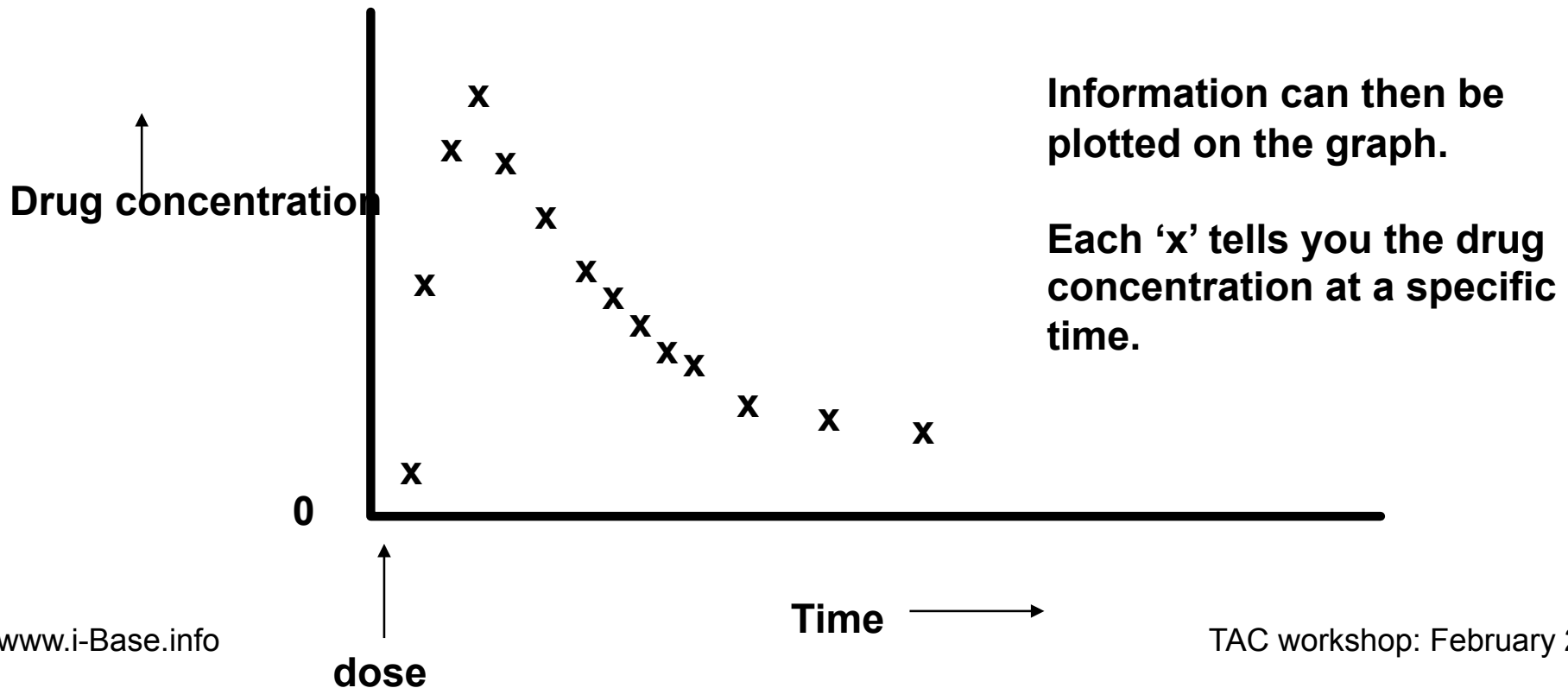
There are usually 2 -axis. In this example drug concentration is measured on one axis and time is measured on the other.



Using graphs

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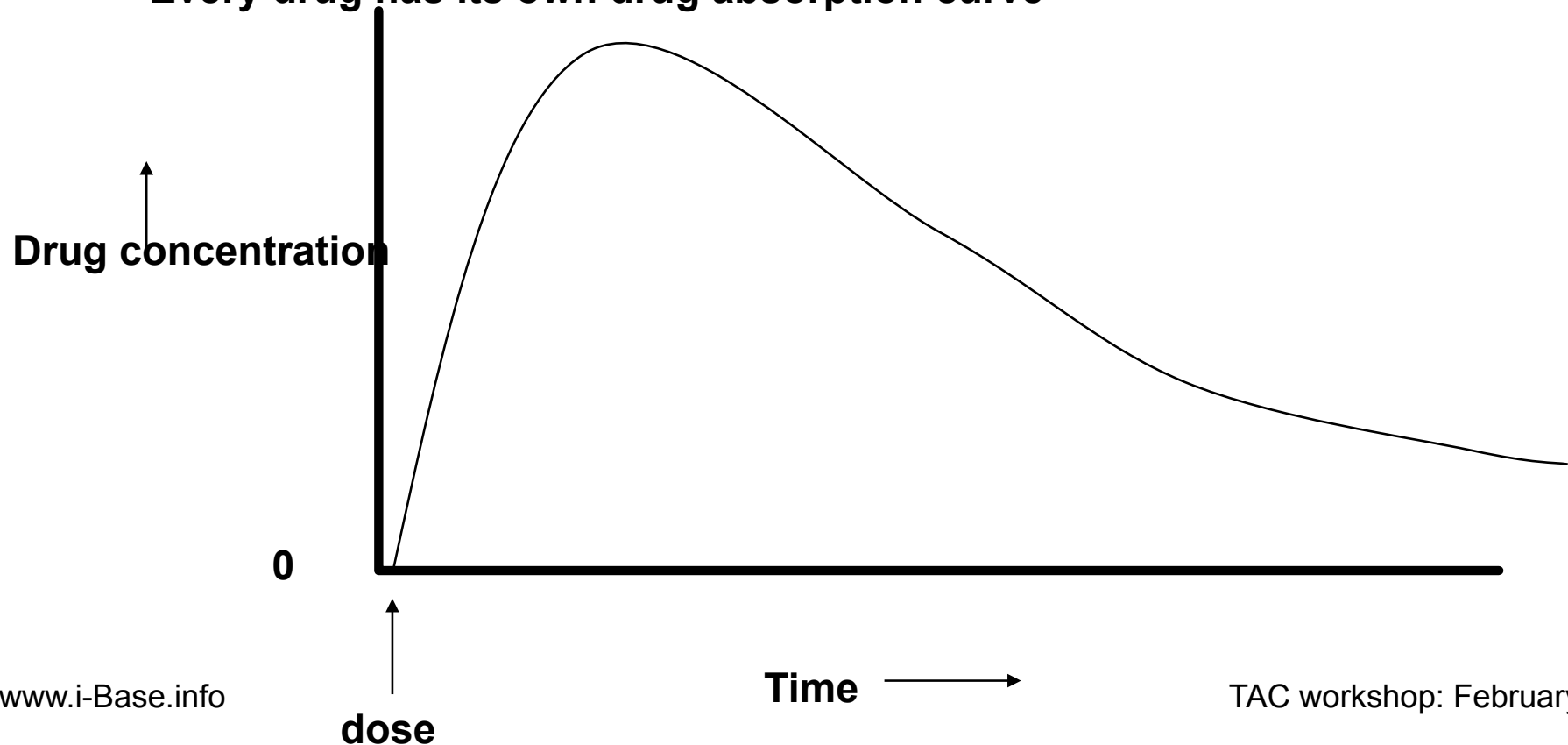
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Drug absorption

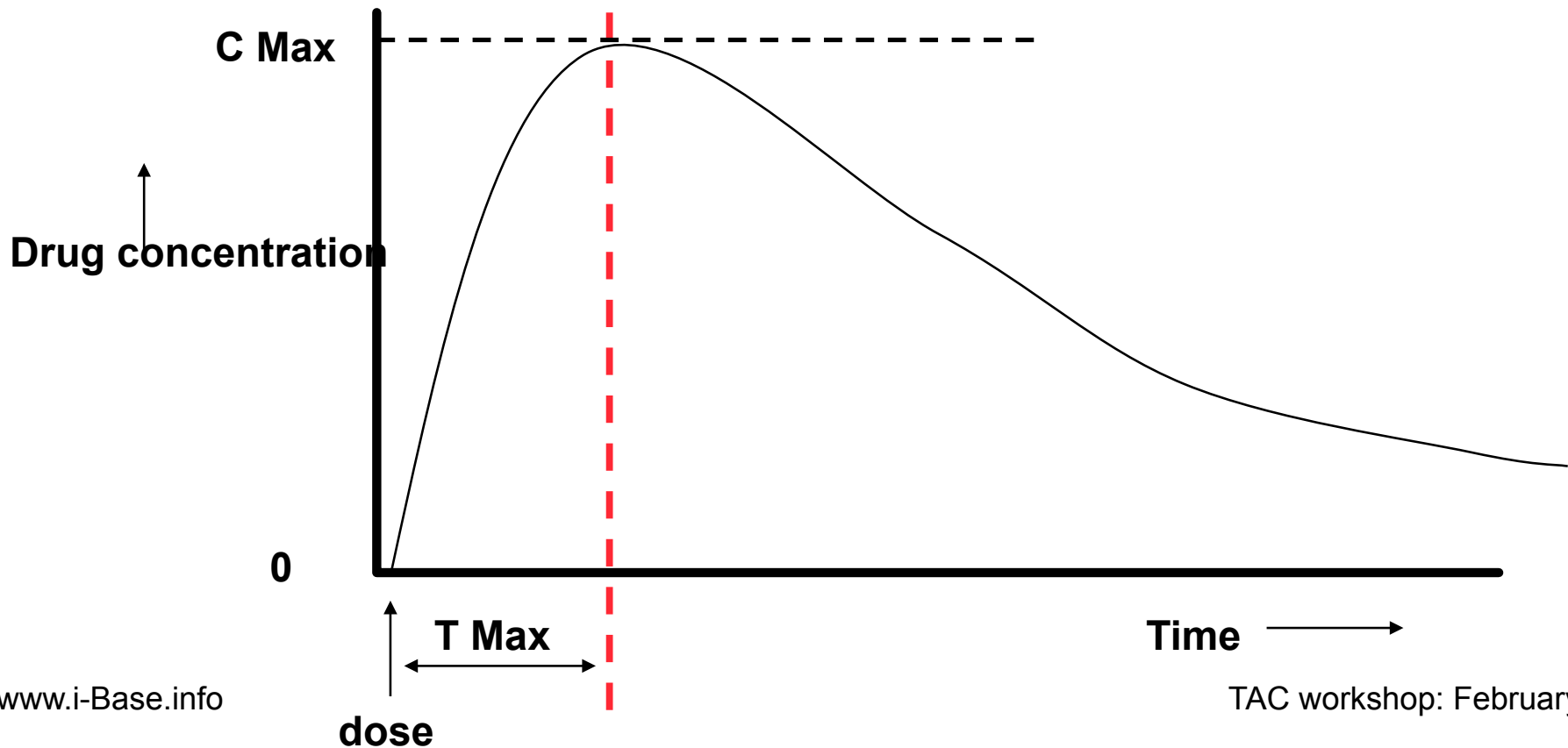
After taking a drug, levels peak quickly and then slowly drop as the drug is broken down and metabolised by the liver and/or kidneys.

Every drug has its own drug absorption curve



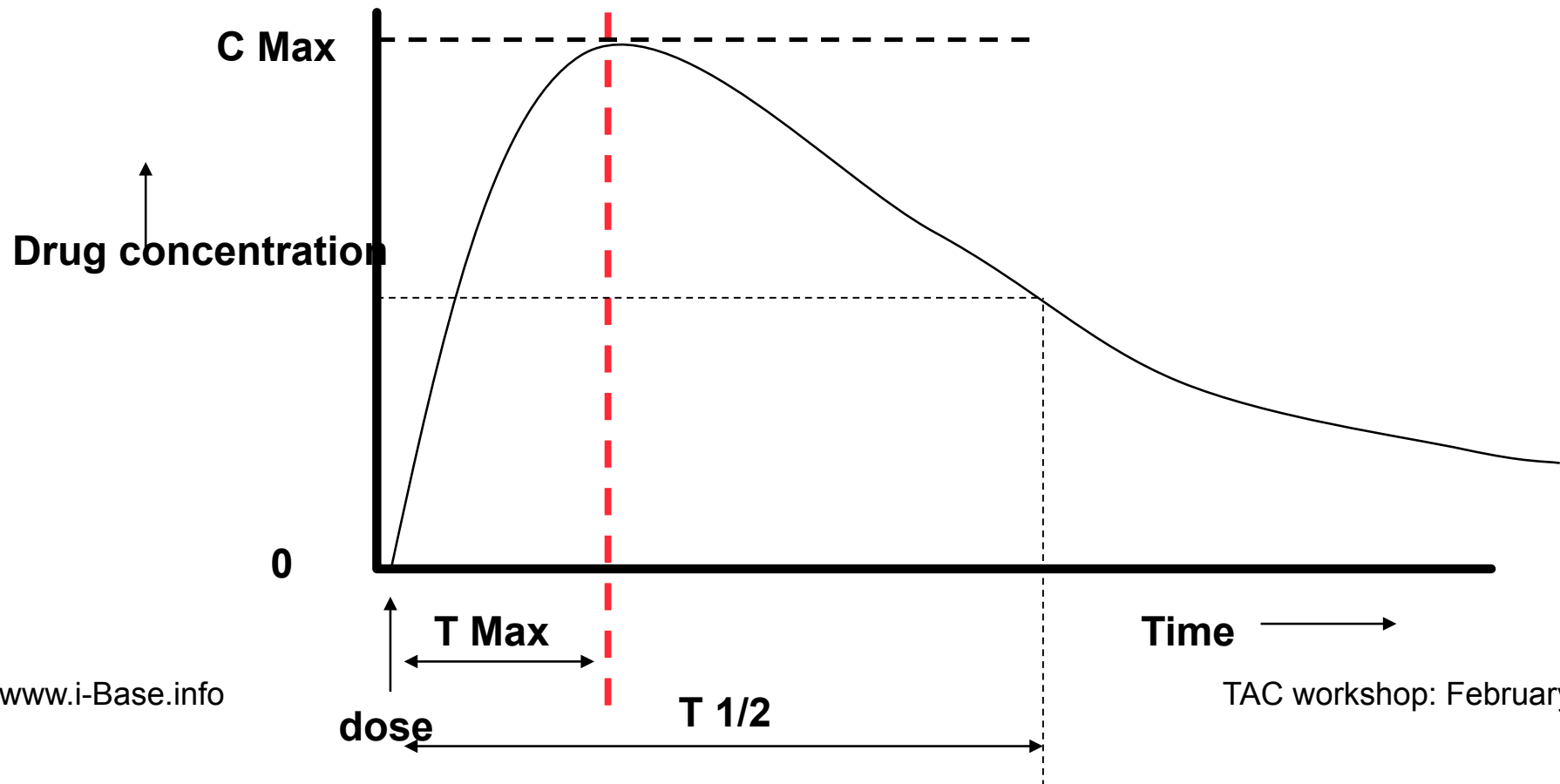
Drug absorption

C max = the maximum concentration - usually reach after a few hours
T max = the time taken to reach the maximum concentration



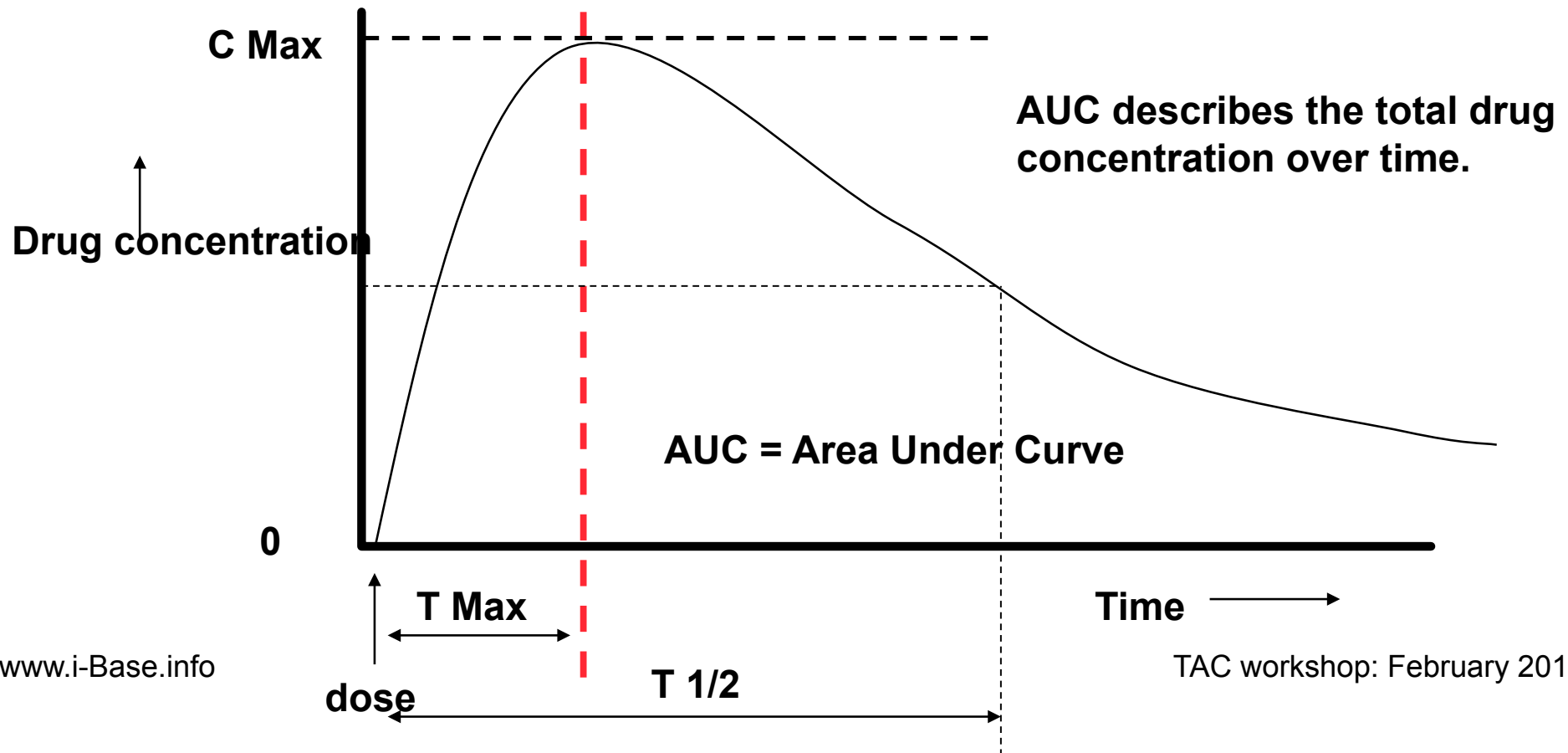
Drug absorption

T 1/2 (half life) = time taken for C max to drop in half
It takes 5 x T 1/2 for a drug to be eliminated from the body



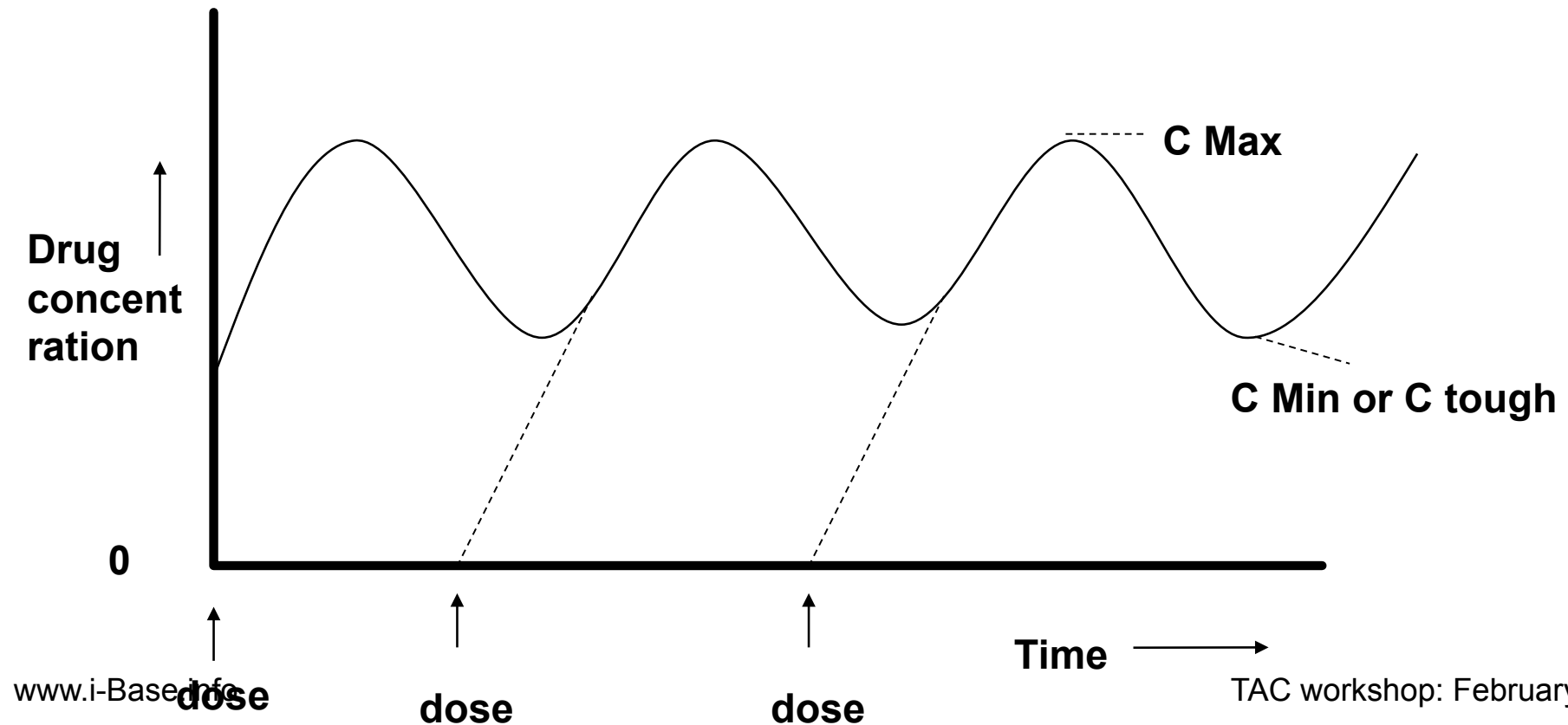
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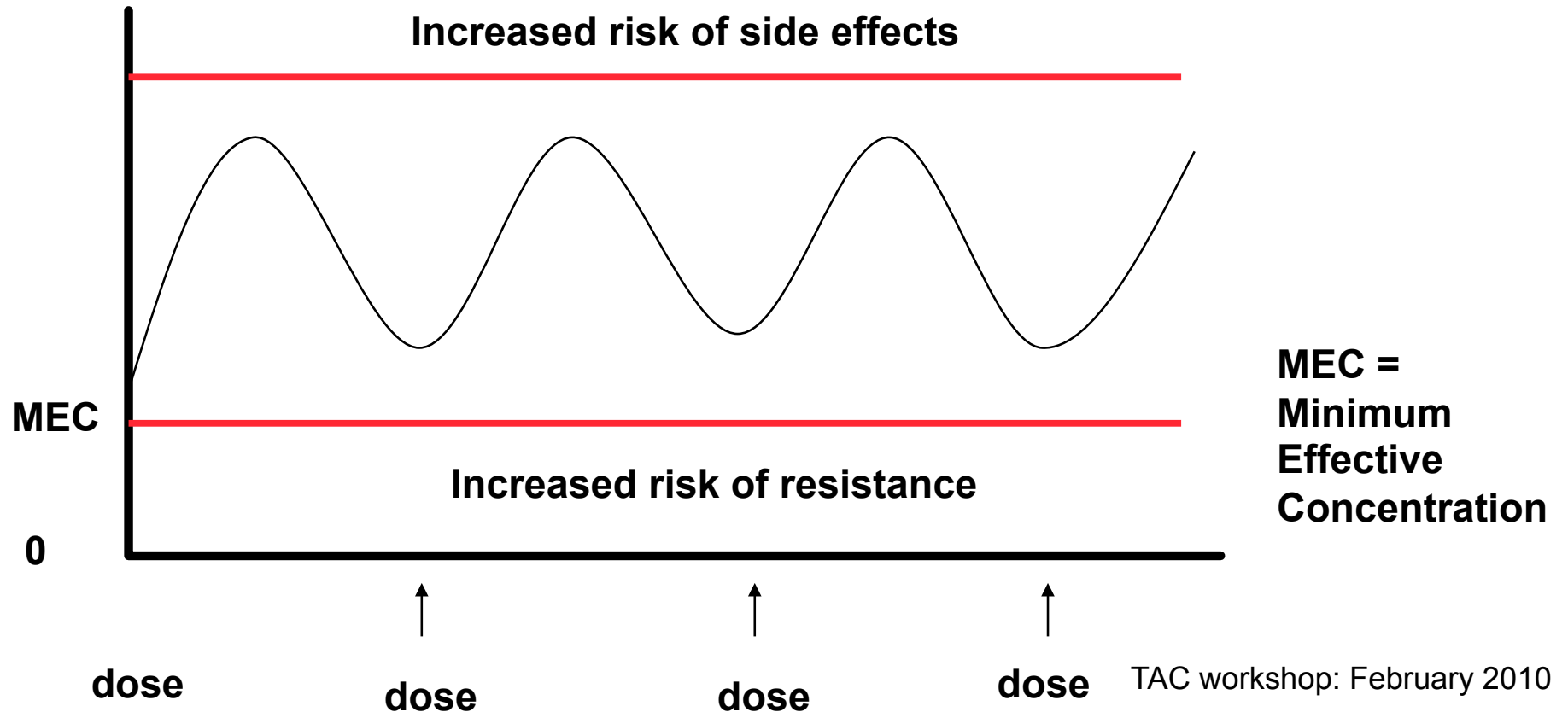
Drug absorption.2

When you take another doses of a drug, it boosts the level again.
Each dose taken on time makes sure that you keep above a minimum level



Drug levels and resistance

The target drug level needs to be above the MEC to avoid resistance and not so high as to cause side effects



Drug levels and resistance.2

If you miss a dose or are late drug levels can drop to a level where resistance can occur

